



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/955,969	09/20/2001	Yoshitsugu Hama	2001_1299A	1913

513 7590 11/06/2002

WENDEROTH, LIND & PONACK, L.L.P.
2033 K STREET N. W.
SUITE 800
WASHINGTON, DC 20006-1021

EXAMINER

MENON, KRISHNAN S

ART UNIT	PAPER NUMBER
----------	--------------

1723

DATE MAILED: 11/06/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/955,969

Applicant(s)

HAMA ET AL.

Examiner

Krishnan S Menon

Art Unit

1723

AS-4

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 9-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "paper making" in 2nd para. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Goettmann (US 5,851,355).

Goettmann (355) teaches a semipermeable membrane support comprising a non-woven fabric with a main fiber and a binder fiber formed of synthetic resin, manufactured by paper making process and then heating and pressing (abstract, col 3 lines 55-67, col 4 lines 1-19).

Goettmann (355) teaches ratio of tensile strength between paper feed direction and width direction as 1.5:1 as in instant claim 1 and 7 (Table I);

Art Unit: 1723

The fiber fineness is between 0.6 and 8.9 decitex (col 3 lines 55-67; 1 denier = 1 gm for 9000m fiber as opposed to 1 decitex = 1g for 10,000 m.) as in instant claims 2 and 3; Air permeability of 0.5-7 cc/cm²/sec as in instant claim 4 (col 3 lines 5-10) [The Frazier Differential Pressure Air Permeability Instrument's permeability readings are rates of flow of air in cubic feet per square foot of sample area per minute at a differential pressure of 0.5 inches of water. 1 CFM = 0.508 cc/cm²/sec.].

Since the material of the fibers, the decitex of the fibers, the process of making the non-woven, the tensile strength ratios and the air permeabilities are similar, and it meets the intended degree of adherence or bonding with the membrane applied on it (col 2 line 66-col 3 line 10), the porosity of the non-woven as taught by Goettmann (355) also would be inherently between 5 and 15 microns as in instant claim 5. The support would be capable of preventing bending in the width direction during manufacture of the semipermeable membrane, since it meets the tensile strength requirements (table 1) as in instant claim 6.

2. Claim 8 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Shinjou et al (US 4,795,559).

Shinjou (559) teaches a semipermeable membrane support made by heating and pressing after paper making (abstract, col 3 lines 37-43) with tensile strength ratio 1:1 (Table 1) having the membrane-coated front surface rougher than the rear surface as in instant claim 8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1723

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goettmann (355).

Goettmann (355) teaches a semipermeable membrane support with two different fibers and manufactured by the paper making process and heat-pressed. Goettmann (355) teaches all parameters of the non-woven such as material, fiber decitex, tensile strengths, and air permeability (col 3 line 55- col5 line 55, tables) as taught by the instant application, except the porosity of the membrane as between 5 and 15 microns. It would be obvious to one of ordinary skill in the art at the time of invention that since the non-woven as taught by Goettmann (355) has properties same as what is taught by the instant application, particularly the air permeability, it would have similar range of porosities. One of ordinary skill in the art at the time of invention would expect it to have same porosity range because it meets the requirements for applying the membrane on its surface (col 2 line 66 - col 3 line 10).

Conclusion

Art Unit: 1723


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The applicant(s) may please make a note of the references Schultheiss et al (US 4,180,611), Degen et al (US 5,614,095) and Kihara et al (US 6,277,282 B1) teach similar membrane supports.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 703-305-5999. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 703-308-0457. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Krishnan S. Menon
Patent Examiner
October 31, 2002


W. L. WALKER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700